

Work Order ID 69988

Wednesday, May 25, 2011 10:36:50 AM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 5/25/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/10/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

H

Date: 11-05-25

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2580-041

Rev.D DEO-D1

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 - CHG004

CHG002

Sulezlap

JJ for BG 11-6-30

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

DE 11/06/14
3 Bend 11/06/14

B 6 9 9 8 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Item Name: Replacement Skidtube

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Cust Item ID:

Required Date: 6/10/2011 Req'd Qty: 1.00



Customer:

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Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
Skidtubes	Memo	0.00							
Skidtubes	1- Deburr ends and remove bending marks								
	2- Prepare tube for swaging as per QSI 002								
130	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

1 0 BE11/06/14

DP 11-6-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI004

A/R□□□ Aluminum Rod

MI17456

BE 11/06/15

2-Grind welds on step as per Dwg D2580

3-Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x17G to start expansion and finish with 1/2 x 18G to achieve dwg dimension.

WELDED

A/R MI17456

BE 11/06/15

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web. Debur

BB

11/06/16

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Debur

BB

11/06/16

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Debur

150

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

S. M. 11/06/16

Pro →

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-041 PAR #: N/A Fault Category: Landing Gear SKID tube NCR: (Yes) No DQA: AS Date: 11.07.05
 11-700 Resolution: Re-work Disposition: Re work QA: N/C Closed: ✓ Date: 11/07/05

NCR: <u>69988</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/6/17	140	Found at inspection that the Fwd most saddle hole on one side of the skid tube is not align. causing the saddle to not fit.	CP 11.06.17 OSI 042	- Drill out Fwd most saddle hole (from aft) Remove x-bolt spacer	BE 11-6-20		CP 11.06.17 OSI 042	S 11/06/17
		hole appears to be all by at least .0.060". R.C. tube not Drilled correctly and not found in D205-041	CP 11.06.17	- Re weld in correct location D25 79-1 B 70761 AS per OSI 004 A/R <u>M117456</u>	BE 11/06/20		CP 11.06.17	S 11/06/17
		B69212 LGA	CP 11.06.17	- Re centre hole + Deburr AS per Dwg.	BE 11/06/20		CP 11.06.17	S 11/06/17

NOTE: Date & initial all entries

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Item ID: D205-634-041

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Required Date: 6/10/2011 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8 w/06/22

170



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

IX Ø M-11/06/22

180



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

1:20
320 OF
7:50

IX Ø M-11/06/23

M116964

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 0 11/06/24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Cust Item ID:

Required Date: 6/10/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of

Sikaflex on insert holes before installing wearplates

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 1117516

Sikaflex expire date: 6/1/15

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with

Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 1117514

Sikaflex expire date: 6/1/15

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: 1117863

1 0 1117863

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Stop



Item Name: Replacement Skidtube

Start Date: 5/25/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/10/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8/10/11

Memo

0.00

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

220



Packaging

Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPPD205-634-041

Location: _____

PPP Rev: _____

11/7/11

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

11/7/11

ME 11-07-04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Wednesday, May 25, 2011 10:36:55 AM

Page 1

Work Order ID: 69988

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 5/25/2011


Required Date: 6/10/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19
per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4202-1  Spacer	D2579	Manufactured	No			140	Each	443.0000	20	20			
---	-------	--------------	----	--	--	-----	------	----------	----	----	--	--	--

Location

Loc Qty

Loc Code

LG002

443

66929

106

67129

196

67308

1

67430

140

D2580-1

Manufactured

No

110

Each

2.0000

1

1



205 Skidtube bent detail

Location

Loc Qty

Loc Code

LG

2

69212

2

D2576-3

Manufactured

No

140

Each

54.0000

1

1



Step (maching detail)

Location

Loc Qty

Loc Code

LG

54

66156

54

BE 4/6/15
B68737 x7
B70761 x13

11-6-14

BE 11/6/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 2

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Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 5/25/2011

Required Date: 6/10/2011

Start Qty: 1.00

Required Qty: 1.00

D2855
Cap
Manufactured No

200 Each

54.0000

1

1



HL 1106124

Location

Loc Qty

Loc Code

FP007

54

53791

17

65519

2

65569

35

XL

AN3-5A
Bolt
Purchased No

200 Each

1,158.000

2

2



HL 1106124

Location

Loc Qty

Loc Code

ST350

1158

115371

358

117423

800

XZ

AN960JD10L
Washer
NAS1149D0332J Purchased No

200 Each

0.0000

2

2



M 117291 (X2) HL 1106124

ALS7-1032-130
Insert
Purchased No

200 Each

1,987.000

50

50



HL 1106124

Location

Loc Qty

Loc Code

ST281

20

117331

20

ST282

1967

116800

7

117717

1960

X50

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID: 69988

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 5/25/2011

Required Date: 6/10/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

200

Each

2,467.000

50

50



Handwritten: 50 1106124

BOLT

Location

Loc Qty

Loc Code

ST350

2467

117872

x50

117094

955

117313

212

117688

800

117795

500

AN960C10L

NAS1149C0332

Purchased

No

200

Each

0.0000

50

50



118078



Handwritten: (x50) 1106124

washer

D3566-13

Manufactured

No

200

Each

46.0000

1

1



Handwritten: 1106124

Gasket

Location

Loc Qty

Loc Code

FP

26

69281

26

FP014

20

68341

20

x1

D3566-5

Manufactured

No

200

Each

37.0000

1

1



Handwritten: 1106124

Gasket

Location

Loc Qty

Loc Code

FP015

37

67589

4

68961

33

x1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 5/25/2011

Required Date: 6/10/2011



Start Qty: 1.00

Required Qty: 1.00

D3566-1	Manufactured	No	200	Each	53.0000	2	2
							<u>yl</u> 11/06/24
Gasket							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP015	53	
68924	29	
<u>69279</u>	24	

D3564-11	Manufactured	No	200	Each	13.0000	1	1
							<u>yl</u> 11/06/24
Wearshoe							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP019	13	
<u>69119</u>	13	

D3564-13	Manufactured	No	200	Each	33.0000	1	1
							<u>yl</u> 11/06/24
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP016	18	
69280	18	
FP017	15	
66136	3	
<u>66805</u>	12	

D3564-9	Manufactured	No	200	Each	16.0000	1	1
							<u>yl</u> 11/06/24
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP019	16	
67590	4	
<u>68349</u>	12	

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Shop Packet Print

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Start Date: 5/25/2011

Required Date: 6/10/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-5

Manufactured No

200

Each

23.0000

1

1



Wearshoe



u106120

Location

Loc Qty

Loc Code

FG

2

34806

2

FP019

21

67588

1

68960

20

x1

D2594-3

Manufactured No

200

Each

1,012.000

16

16



O-Ring, 205 Skidtube



u106120

Location

Loc Qty

Loc Code

FP-A

1012

65518

70

66952

942

x16

D2594-1

Manufactured No

200

Each

441.0000

16

16



Plug, 205 Skidtube



u106124

Location

Loc Qty

Loc Code

FP-A

441

42807

28

66932

106

67441

7

68943

300

X16

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07.06.28 *[Signature]***DEO ATTACHED**

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 09988

[Signature] 05-25**Copyright © 1996 by DART AEROSPACE LTD**

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

D2580-1 DRILLING DETAIL

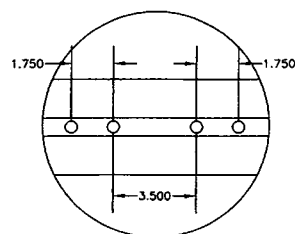


Diagram illustrating the underside of the D2576-3 step, showing the locations for grinding and the location ridge. The diagram includes the following labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576

RELEASED
07.06.78

DEO ATTACHED

Technical drawing of a circular component with the following annotations:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)
- AN3-5A BOLT (1)
- AN960JD10L WASHER (1)
- (2 PLACES)
- D2855 CAP
- 0.40
- SEAL WITH SIKAFLEX-241/-291
- SEE NOTE ii)

Diagram of a circular spacer assembly. The assembly consists of a central circular body with two vertical internal webs. Labels point to various parts: 'D2579 SPACER' points to the outer ring, 'D2596 WEB (REF)' points to one of the internal webs, and 'AL57-1032-130 (REF) (TYP 50 PLACES)' points to the small circular features at the ends of the webs. A note on the right side of the diagram provides instructions for drilling and bending the assembly.

5

D2579 SPACER

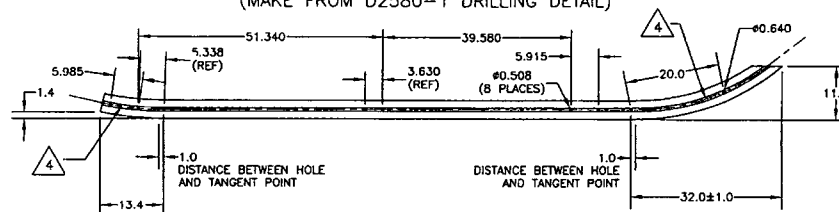
D2596 WEB (REF)

AL57-1032-130 (REF)
(TYP 50 PLACES)

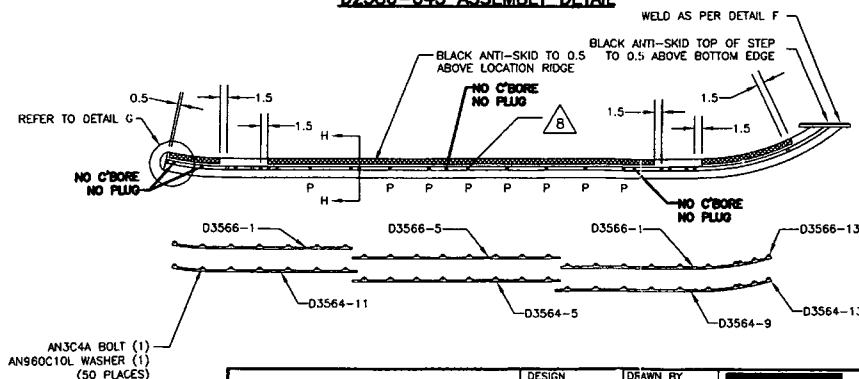
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 x 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 x 1.00 DEEP

D2580-5 BENDING AND CUTTING DETAIL
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



D2580-045 NOTES

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE
WITH THE SPACER AT THIS LOCATION

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DESIGN

1

CHECKED

DATE _____

07.02.27

DRAWN BY

PL

APPROVED

DART

DART AEROSPACE LTD.
MADISONVILLE, ONTARIO, CANADA

DRAWING NO

02580

[illegible]

205 SKIDTIRE ASSEMBLY

REV. D

SHEET 3 OF 3

SCALE

1:24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D2580	TITLE 205 SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2580-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>R</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 10.09.22	DATE 10.11.04	DATE 10.11.04	DATE 10/11/04		DATE 10.11.04		

PURPOSE:

CHANGE ALL WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

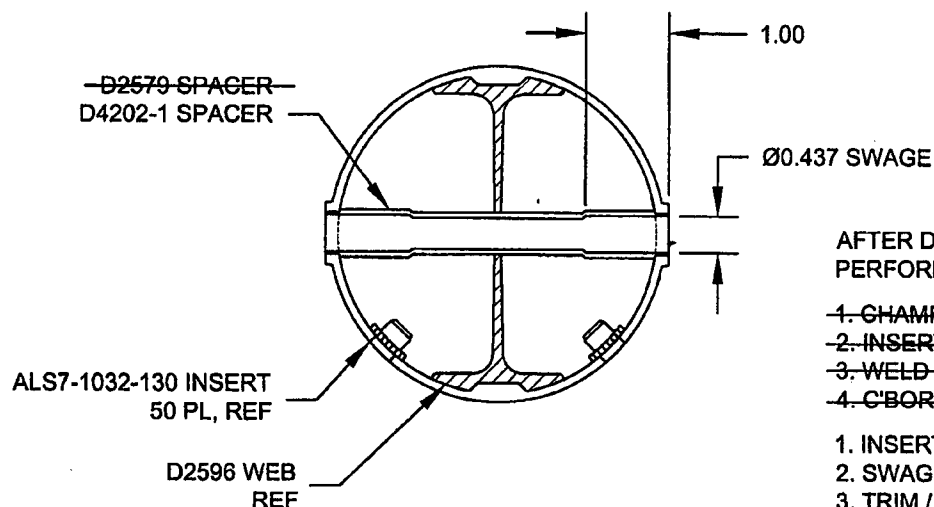
WAS

QTY	QTY	PART NUMBER	DESCRIPTION
-041	-045		
20	24	D2579	CROSS BOLT SPACER

IS

20	24	D4202-1	SPACER
----	----	---------	--------

SECTION D-D & SECTION H-H ARE AMENDED AS FOLLOWS:



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 24 PL (-045)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

SECTION D-D
NOT TO SCALE

SECTION H-H
NOT TO SCALE

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Linda Lacelle

From: dshepherd@dartaero.com
Sent: April 18, 2011 11:36 AM
To: Linda Lacelle; Mike Petsche
Cc: Bill Beckett; 'Chris Provencal'; 'Eric Charbonneau'
Subject: Re: Alum. Solution Anneal - swaging

Makes sense to me ... We don't want to get caught short ... Make sure that if we do this, they are identified w the old CHG number.

David

Sent from my BlackBerry device on the Rogers Wireless Network

From: "Linda Lacelle" <llacelle@dartaero.com>
Date: Mon. 18 Apr 2011 11:21:10 -0400
To: 'Mike Petsche' <mpetsche@dartaero.com>; <dshepherd@dartaero.com>
Cc: 'Bill Beckett' <bbeckett@dartaero.com>; 'Chris Provencal' <cprovencal@dartaero.com>; 'Eric Charbonneau' <echarbonneau@dartaero.com>
Subject: RE: Alum. Solution Anneal - swaging

I am ready to weld some up, I don't want to get into trouble with L/T's on these, any objections??
LL

From: Mike Petsche [mailto:mpetsche@dartaero.com]
Sent: April 18, 2011 10:42 AM
To: 'Linda Lacelle'; dshepherd@dartaero.com
Cc: 'Bill Beckett'; 'Chris Provencal'; 'Eric Charbonneau'
Subject: RE: Alum. Solution Anneal - swaging

Well I'm not sure what to say.

CHG ~~CCF~~ D2574

It is my understanding that the swaging will still make sense even with the extra hoops we need to jump through.

If there is still uncertainty on the delivery of the material, we CAN still weld them if we need to.

And while this might be less than "world class", couldn't we take some of our tubing that we have in stock and zap it with the welder to knock down the temper a little? Ground clamp on one end, torch on the other.....BZZZZZZT.

(I'm only sort of joking....because I bet it would work)

From: Linda Lacelle [mailto:llacelle@dartaero.com]
Sent: April 18, 2011 9:44 AM
To: dshepherd@dartaero.com; 'Mike Petsche'
Cc: Bill Beckett; Chris Provencal; Eric Charbonneau
Subject: RE: Alum. Solution Anneal - swaging
Importance: High

NO. 251

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 68708 - 68708
Part number: 205 - 634 - 041
Description: 205
Welding Process: Tig[] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap): pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier Rat Evers Date of Test Coupon 11-05-05
Welder Barclay Elliott Date of Test Coupon 11-05-05

The above named individual is qualified in accordance with AWS D17.1.2001 to weld